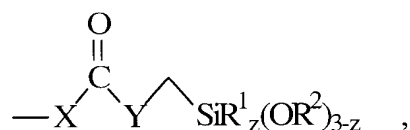


### **Remarks**

Claims 10-21 are pending.

The claims have been rejected for obviousness double patenting over commonly assigned and co-pending U.S. application Serial No. 10/468,633. Applicants respectfully traverse this rejection. The '633 application is the National Phase of PCT published application WO/02/066532 A1, and discloses foamable mixtures containing prepolymers having silane end groups of the formula



in other words, prepolymers which are terminated by reactive alkoxy groups  $[-\text{SiR}^1_z(\text{OR}^2)_{3-z}]$ , separated from an electronegative  $-\text{X}-\text{C}(\text{O})-\text{Y}-$  group by a methylene ( $-\text{CH}_2-$ ) "spacer." The inventors, one of whom is also an inventor of the present subject matter, discovered the quite remarkable fact that the methylene spacer is of paramount importance in the reactivity of the prepolymers, which must be able to foam and cure within a reasonable time in the presence of atmospheric moisture.

However, the prepolymers utilized in the '633 application are incompatible with commonly used blowing agents, as discussed in the present specification on page 6, line 31, to page 8, line 11, and in the Comparative Examples. This incompatibility is surprisingly eliminated by substitution of one of the methylene-spaced alkoxysilyl groups with a non-silicon-containing end group of the formula  $\text{A}^1-\text{R}^1$  where  $\text{A}^1$  is oxygen,  $-\text{NR}^2$ , or sulfur, and  $\text{R}^1$  is a  $\text{C}_{2-50}$  hydrocarbon radical. Despite reduction of the total number of crosslinkable alkoxysilyl groups by replacing them with unreactive groups, good quality foams could still be obtained, and not only are the prepolymers more compatible with commonly used "green friendly" blowing agents, but moreover, when the blowing agent concentration is higher than the solubility limit such that



separation in the spray can occurs, the blowing agent can be reemulsified by simple shaking, whereas with the products of WO/02/066532 (U.S. 2004/0072921)<sup>1</sup>, reemulsification in the can is virtually impossible. See, e.g., Examples 3, 5, 7, and 8 which are foamable mixtures of the subject invention, and contrast these with Comparative Examples 2, 3, and 4. The prepolymer of these comparative examples is the preferred prepolymer of the '921 publication, having the end groups of formula [2] in ¶ [0029] of that published application.

The '921 publication (Serial No. 10/468,633) does not mention blowing agent incompatibility, nor does it suggest the prepolymers claimed in the subject invention, which contain the very reactive alkoxysilylmethyl groups on only one end of the prepolymer chain. A reference which does not recognize a problem cannot suggest a solution and therefore raises no issue of obvious subject matter. *In re Shaffer*, 108 USPQ 326 (CCPA 1956).

Moreover, once one skilled in the art recognized the blowing agent incompatibility problem, he or she would not be directed to any solution by the 10/468,633 application. The present subject matter is clearly non-obvious over the '633 application, and therefore no terminal disclaimer is necessary. Moreover, the present application does not extend Applicants' legal rights under the '633 application, because upon the expiration of that application, its subject matter can be freely practiced without infringing any patent issuing from the present application. Withdrawal of the obviousness-type double patenting rejection is respectfully solicited.

Claims 10-21 have been rejected under 35 U.S.C. § 102(c) over the '921 published application in connection with either Cook et al., U.S. Patent 5,512,319 (*Cook*), or Lovell, U.S. Patent 3,730,822 (*Lovell*). This rejection is not understood.

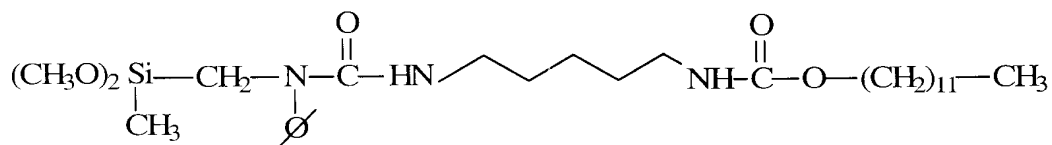
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<sup>1</sup>The Application Serial No. 10/468,633 application is the U.S. National Phase of WO/02/066532 PCT application. The 10/468,633 application was published as U.S. 2004/0072921. Thus, all these are equivalents. The WO/02/066532 PCT application is discussed on page 6 (bottom) and page 7 of the present application.



If the rejection is under 35 U.S.C. § 103(a), Applicants respectfully request clarification, as no rationale for the incorporation of *Cook* or *Lovell* has been given by the Office, and indeed these references appear to be directed to the wholly different field of polyurethane foams, not alkoxysilyl foams.

Finally, the claims are not anticipated under any subsection of 35 U.S.C. § 102, as the '921 publication does not disclose the claimed subject matter. The claimed compositions require a mixture of prepolymers in which 1-50% of the prepolymer chain ends are terminated by groups of the formula [2],  $-A^1-R^1$ . An example of the latter is the reaction product of an isocyanate terminal group with dodecanol, as used in Example 2. The resulting prepolymer thus has different end groups, and is of the formula





Note the carbamate ester (alkyl urethane) group on the right side. The '921 publication does not disclose prepolymers having such end groups. If the Office believes otherwise, it should point with particularity to those paragraphs of the published application which discloses such terminal groups. There can be no rejection under 35 U.S.C. § 102, and the examples and comparative examples show convincingly that the claimed subject matter is non-obvious under 35 U.S.C. § 103(a).

Withdrawal of the rejection under 35 U.S.C. § 102(c) is solicited.

Applicants submit that the claims are now in condition for Allowance, and respectfully request a Notice to that effect. If the Examiner believes that further discussion will advance the prosecution of the Application, she is highly encouraged to telephone Applicants' attorney at the number given below.

Please charge any fees or credit any overpayments as a result of the filing of this paper to our Deposit Account No. 02-3978.

Respectfully submitted,

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By 

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Date: March 7, 2008

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